

Draft submitted by applicant
via email

AMENDMENTS TO THE CLAIMS

1. -2. (Canceled)

*Geotrichum
candidum*

3. (Currently Amended) An isolated gene polynucleotide having a DNA sequence of
SEQ ID NO. 8.

4. (Currently Amended) An expression plasmid vector comprising the gene
polynucleotide of claim 3.

*Biological
Deposit?*

5. (Previously Presented) Escherichia coli JM109/pYES92 FERM BP-7032 transformed
with the expression plasmid vector of claim 4.

6. (Currently Amended) A method for degrading and decolorizing a dye, comprising
contacting said dye with a bacterium expressing a peroxidase enzyme encoded by the
plasmid contained in Escherichia coli JM109/pYES92 FERM BP-7032

with the wherein said dye is selected from the group consisting of an azo-containing dye,
an anthraquinone-containing dye, and a phenolic compound; wherein said phenolic compound is
selected from the group consisting of 2,6-dimethoxyphenol and guaiacol.

7. - 15. (Canceled)

16. (Previously Presented) The method according to Claim 6, wherein

the dye is an azo-containing or anthraquinone-containing dye.

17. (Previously Presented) The method according to Claim 6, wherein the dye is at least one member selected from the group consisting of Reactive black 5, Reactive red 33, Reactive yellow 2, Reactive blue 182, Reactive blue 19, Reactive blue 5, Reactive blue 114, 1-amino-4-(3-amino-4-sodium-sulfonoanilino)-2-sodium anthraquinone sulfonate, and 1-amino-4-methylamino-2-sodium-anthraquinone sulfonate.

18. (Previously Presented) The method according to Claim 6, wherein the dye is at least one phenolic compound selected from the group consisting of 2,6-dimethoxyphenol and guaiacol.

19. (Previously Presented) The method according to Claim 6, wherein the contacting is performed at temperature ranging from 15 to 35°C.

20. (Previously Presented) The method according to Claim 6, wherein the enzyme is immobilized.

21. – 23. (Canceled)

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AMENDMENTS TO THE CLAIMS

1. -2. (Canceled)

3. (Previously Presented) An isolated ^{polynucleotide} ~~gene~~ ^{the nucleic acid} having a ~~DNA~~ sequence of SEQ ID NO. 8.

4. (Currently Amended) An expression plasmid vector comprising the ^{polynucleotide} ~~gene~~ ~~according~~
to of claim 3.

5. (Currently Amended) A ^{An} ~~microorganism~~ Escherichia coli JM109/pYES92 FERM
BP-7032 transformed with the expression plasmid vector ~~according to~~ of claim 4.

6. (Currently Amended) A method for degrading and decolorizing a dye, comprising
contacting a peroxidase enzyme ^{as produced} ~~derived from Geotrichum candidum Dec 1~~ FERM
BP-7033, which has the following properties:

a) ~~a property to degrade and decolorize a dye;~~

b) ~~a molecular weight of 60 kDa, by the molecular weight assay as determined by~~
SDS-PAGE;

c) ~~a molecular weight of 55 kDa, by the molecular weight assay as determined by gel~~
filtration; and

d) ~~pI 3.8, as determined by the assay of isoelectric focusing;~~

~~or the microorganism according to claim 5~~ Escherichia coli JM109/pYES92 FERM BP-7032
with the dye.

7. - 15. (Canceled)

16. (Previously Presented) The method according to Claim 6, wherein the dye is an azo-containing or anthraquinone-containing dye.
17. (Previously Presented) The method according to Claim 6, wherein the dye is at least one member selected from the group consisting of Reactive black 5, Reactive red 33, Reactive yellow 2, Reactive blue 182, Reactive blue 19, Reactive blue 5, Reactive blue 114, 1-amino-4-(3-amino-4-sodium-sulfonoanilino)-2-sodium anthraquinone sulfonate, and 1-amino-4-methylamino-2-sodium-anthraquinone sulfonate.
18. (Previously Presented) The method according to Claim 6, wherein the dye is at least one phenolic compound selected from the group consisting of 2,6-dimethoxyphenol and guaiacol.
19. (Previously Presented) The method according to Claim 6, wherein the contacting is performed at temperature ranging from 15 to 35°C.
20. (Previously Presented) The method according to Claim 6, wherein the enzyme is immobilized.
21. – 23. (Canceled)

SUPPORT FOR THE PRESENT AMENDMENTS

Claims 1, 2, 7-15, and 21-23 have been canceled.

Claims 4-6 have been amended.

The amendment of Claims 4-6 is supported by the corresponding claims as previously presented and pages 4-34 of the specification as originally filed, for example at page 31, lines 13-20.

No new matter has been added by the present amendment.